MEDICAL BENEFITS UNDER WORKMEN'S COMPENSATION. I

Perhaps in no one branch of legislation have efforts toward uniformity been so persistent and at the same time so futile as in workmen's compensation. From the very first, even long before any acts had been passed, during the stage of preliminary study by commissions many conferences were held,[1] and at present an organization of governmental institutions created to administer the laws[2] offers a convenient medium for comparison of differences. In addition, many private organizations of attorneys[3] of labor, of social reformers,[4] of employers,[5] and of political parties[6] have formulated comprehensive standards for such uniformity—all differing widely of course in accordance with the particular views and interests represented. Nevertheless actual legislation enacted is of such bewildering variety that hope for uniformity seems farther removed now than it was seven years ago.

This variety makes the study of this (as well as many another) branch of legislation extremely difficult, and for this reason alone it may appear to the student as an unmitigated evil. Yet it is a trite observation that legislation is not enacted for the convenience of the student of law and economics. If everybody could only agree as to the proper standards of legislation, every deviation from

[1] See Atlantic City Conference on Workmen's Compensation, July 29–31, 1909; *Proceedings of the Third National Conference on Workmen's Compensation for Industrial Accidents*, Chicago, June 10, 1910; *Proceedings of Conference of Commissions on Compensation for Industrial Accidents*, Chicago, November 10–12, 1910.

[2] National Association of Workmen's Compensation Boards, organized in 1914.

[3] Conference of Commissioners on Uniform State Laws, 1913.

[4] *Standards of Workmen's Compensation Laws.* By the American Association for Labor Legislation, 1914.

[5] Tentative draft; memorandum of suggestions upon main provisions requisite to an adequate compulsory Workmen's Compensation Law. Issued by the National Civic Federation, December 1, 1914. National Association of Manufacturers Fifteenth Annual Convention, New York, May 16–18, 1910.

[6] *Standards of Workmen's Compensation.* Prepared for the Committee on Social and Industrial Justice of the Progressive National Service, New York, 1915.

such standards might be readily characterized as an error. But no such agreement exists at present. The existing variety at least offers an opportunity for free experimentation, and if the assumption be justified that the goodness of the good law (as well as the badness of the bad law) may be demonstrated in its application, the variety offers an opportunity for comparisons the effect of which should be a wholesome tendency toward improvement of all the acts. The law enacted in New Jersey in 1911 and, notwithstanding many amendments, practically unchanged since then, has perhaps more than any other been supported as the "best act," the one that particularly satisfied all parties concerned. More than any other act it has influenced subsequent legislation, perhaps because it is the oldest of them. As a matter of fact, however, it is probably the least generous and, with one or two exceptions, the least just.[1]

If the essential purpose of a compensation law is not to relieve courts, nor to prevent waste of insurance premiums, nor to establish peace between capital and labor, but to do what its official designation indicates, namely, to compensate the injured workman or his dependents, then it evidently follows that the crucial point by which a compensation law is to be judged is the degree in which it succeeds in accomplishing this purpose. The law must be tested by its compensation scale.

Unfortunately, for various reasons, other features of the act have caused most discussion—constitutional and legal features, especially during the earlier stages of the compensation movement when the constitutionality of compensation was seriously disputed. Later the inevitably higher cost of compensation as compared with the old employers' liability (though not nearly so much higher as was assumed) created the movement for state insurance for the purpose of reducing the cost through elimination of profits, elimination of the selling cost, or even through a substantial subsidy from the public treasury to the cost of conducting the insurance business. Depending upon the views of the critics, the Washington law or the New Jersey law was declared to be the best or the worst law in the

[1] See *Three Years under the New Jersey Workmen's Compensation Law.* Published by the American Association for Labor Legislation, 1915. See also *American Labor Legislation Review*, V, No. 1.

country, because one established compulsory state insurance and the other left an entirely free field to the enterprise of private insurers, though, as a matter of fact, both acts are grossly inadequate in the provision they make for the injured employee.

The constitutional, administrative, and insurance features of the various compensation acts are far from being settled. Nevertheless the time has come for a careful study of the essential, organic provisions of the acts, as their effects upon the economic status of the working class are beginning to be felt.

In a recent comprehensive study of "The Field of Workmen's Compensation in the United States"[1] Professor Willard C. Fisher properly emphasizes the greater importance of adequacy as compared with uniformity of these laws. It is evident, however, that, barring differences of verbiage or administrative details, absence of uniformity necessarily presupposes absence of adequacy in some acts, since it may be safely assumed that definitely excessive standards, as compared with the economic loss sustained, can hardly be expected. "It is obvious," says Professor Fisher, "that something like uniformity of scope, uniform adequacy of scope, is more important than any uniformity of awards, more important for the employer, for the employed, and for any who may be affected through these." In support of this view Professor Fisher quotes the incontravertible consideration that "while it is far from being a matter of indifference to an injured workman or his widow whether an award was at $10 a week, or at $13.33, still to have at least the $10, rather than nothing, or nothing but a right of action against an employer, is the great advantage."

The argument, while true, has its limitations. Evidently the difference between the adequate and the actual amount may be so great that it becomes a matter of very great importance. In the case of one western state, for instance, the compensation act came very near being adopted with a provision placing a maximum limitation of $7.20 a week, which would be a matter of grave concern to a permanently crippled employee with a large family.

In comparison with "nothing" even $7.20 a week may appear a competence. But the value of a "right of action against the

[1] *American Economic Review*, V, No. 2 (June, 1915), pp. 221–78.

employer" was very much more than nothing in most states, except possibly Pennsylvania. The writer need not be suspected of any desire to make a defense of the discredited and almost universally abandoned system of employers' liability. But practical insurance men know that the "right of action" had and still has a substantial value, quite irrespective of the purely legal aspects of the claim of employers' negligence. The tendency of the academic student to grow enthusiastic over a compensation act as such, irrespective of its provisions, is of itself commendable because of the great importance of the underlying principle. Nevertheless there would have been a more critical attitude toward the compensation laws if the actual working out of the employers' liability laws through the medium of liability insurance had been better known to the laity. The effective statement so often made that under liability only one out of ten accidents was compensated, while under compensation each one received adequate compensation, would have lost a good deal of its force if it were more generally known that as a matter of fact the proportion of compensated cases to the total number of accidents reported is surprisingly equal under liability and under most compensation acts with a two weeks' waiting period, namely about 20 to 25 per cent. The fact is that the despised "right to action," always present, had a market value of its own, because of the necessary cost of litigating the action in court and also because of the ever-present chance of a larger or smaller verdict. In consequence, only a very small proportion of cases ever reached the court, but in most cases where the injury was at all grave and the common law liability had been modified by statutory enactments, the claims were settled by the sale, as it were, of that right of action to the insurance company for some substantial consideration. It is because of this, because of the comparison between two amounts, that there was so much opposition to compensation laws among workmen, and that even now efforts are not infrequent, on the part of the injured employee or his legal representative, to find a loophole in the compensation act and to bring the case into court under common law liability. From the point of view of the injured workmen the judgment of the essential fairness of our compensation legislation is largely based upon adequacy of reward.

Again, there is another consideration of even greater importance to the student of social legislation: faults of "inadequacy of scope" (meaning failure to bring certain groups of wageworkers under the law) can be very easily corrected. As already stated elsewhere by the writer:

> Many years of study of the history of compensation systems in various European countries have convinced me that faults of limitation are very much less than an unsatisfactory scale. In fact, the history of compensation in Europe gives many examples of a gradual extension of the compensation principle from a few industries to many, until the entire industrial field is covered; but the scale of compensation once established is likely to be very much more rigid, and instances of a thorough reorganization of the scale in Europe are very few. Nor is it at all difficult to understand the reason for this difference. Various forces combine in a movement for a change from the liability to the compensation principle. It is not only the workmen but their employers as well who sooner or later begin to feel the drawbacks of the liability system. Moreover, in so far as the employing interests may offer any resistance to compensation legislation on account of its costliness, it may be easier to overcome one industrial group after another; and a good deal may be said from the point of view of expediency for a gradual introduction of the compensation system. But, just as evidently, no other class but the workers themselves could have any interest in the increase of a compensation scale, and the entire employing class will obstinately resist any such increase. As to disinterested public opinion, it is almost impossible to get its support as strongly in favor of a change in the law as it was in favor of its introduction.[1]

American experience, brief as it is, seems to offer contradictory evidence, but the contradiction is apparent rather than real. It is true that for the short period of this history the revisions of acts have been frequent and many, and that in some cases the compensation scales have been affected. But, after all, notwithstanding all the many changes, only in one case, that of Massachusetts, was the scale of benefits radically raised, increasing the cost of compensation according to various actuarial estimates from 40 to 50 per cent.[2] On the other hand, the number of legislative proposals for the increase of benefits which are introduced annually and buried in committee is enormous.

[1] "Accident Compensation for Federal Employees," *American Labor Legislation Review*, XI, No. 1 (March, 1912), p. 34.

[2] See *Second Annual Report of Massachusetts Industrial Accident Board, 1913-1914*, pp. 72–85.

In this study it is intended to make a critical comparison of the various details of compensation scales, to trace any existing tendencies which may manifest themselves, to compare the different scales of the numerous acts passed and in force with the standards of compensation announced by various official and semiofficial public bodies, to determine, if possible, the effect of these scales upon the economic status of the injured wageworkers and their families, in so far as any evidence concerning it has been accumulated, and perhaps to work out a basic standard inductively. The problem of adequate medical aid is selected as the first subject for consideration.

Except in cases resulting in immediate death (and these are comparatively few—in industry as a whole less than 1 per cent)[1] the occurrence of each and every industrial injury calls for a certain amount of medical and surgical aid. This would seem to be quite evident to everyone except the adherents of Christian Science doctrine, and even they believe in treatment, though of a spiritualized nature. Perhaps in no other feature of compensation legislation are all the interests concerned in such substantial harmony. The injured man wants his life saved, or his pain relieved, permanent results or complications prevented, and his recovery accelerated. In every one of these objects the employer and the insurer are directly interested, because they all tend to reduce the economic loss sustained and therefore the cost of compensation—barring such exceptional cases as that of a dangerously injured workman without dependents whose death may cost less than the lifelong support of an invalid. Surely society at large is interested in promoting everything that can stimulate recovery and restitution of productive powers; for compensation may be placed on the income side of the ledger from the point of view of the workman, but from a broad social point of view it does not by one iota reduce the economic loss occasioned by the accident. Furthermore, from the point of view of insurance, the justice of furnishing such medical and surgical aid is specially evident. Insurance aims to make good a loss sustained. There may be some question as to actual loss

[1] See I. M. Rubinow, *A Standard Accident Table as a Basis for Compensation Rates*, p. 17. The Spectator Co., 1915.

sustained because of the loss of wages. Wages, after all, are not a certainty. But if, as a result of an accidental injury, the workman is forced to pay out his few hard-earned dollars in physicians' or hospital fees, surely for this expense complete restitution should be made.

European precedents are largely in favor of such liberal treatment with regard to medical aid. The compensation movement in the United States was inaugurated by several practical investigations and analytic studies of European legislation.[1] In the latest international compendium of compensation legislation published by the United States Bureau of Labor Statistics (*Bulletin 126*, "Workmen's Compensation Acts of the United States and Foreign Countries") forty-one acts altogether are enumerated and analyzed, and of these twenty-two refer to continental Europe, fourteen to the United Kingdom and British Colonies, three to Spanish-American jurisdictions, and one to Japan. Disregarding the last four recent and comparatively unimportant acts, a comparison between British and European standards is significant. Of the fifteen British acts thirteen entirely disregard medical benefits; two (those of New Zealand and West Australia) allow it up to the generous amount of £1 or $4.87. British legislation has absolutely failed to grasp the true significance of the compensation theory. The situation on the Continent of Europe is entirely different, as the following summary will indicate (the acts of Bulgaria and Montenegro are omitted as indefinite and unimportant):

Austria	For 20 weeks	Netherlands	Unlimited
Belgium	For 26 weeks	Norway	Unlimited (after four weeks)
Denmark	None	Portugal	Unlimited
Finland	None	Roumania	For 2 weeks
France	Unlimited	Russia	For 13 weeks
Germany	Unlimited	Servia	Unlimited
Greece	Unlimited	Spain	Unlimited
Hungary	Unlimited	Sweden	None
Italy	First aid only	Switzerland	Unlimited
Lichtenstein	Unlimited		
Luxemburg	Unlimited		

[1] See F. C. Schwedtman and J. A. Emery, *Accident Prevention and Relief* (investigation on behalf of the National Association of Manufacturers); Frankel and Dawson, *Workingmen's Insurance in Europe* (on behalf of the Russell Sage Foundation); the *Twenty-fourth Annual Report of the U. S. Commissioner of Labor* on "Workingmen's Insurance and Compensation Systems in Europe"; and others.

Out of twenty acts, only three fail to grant medical aid, one grants first medical aid only, in three the limits are sufficiently high to leave out a very small proportion of cases, and twelve offer all the medical aid that is required. It is true that in several of these countries most[1] or all[2] of the medical aid is furnished by the sickness-insurance funds, in which the injured holds compulsory membership, but, after all, the essential feature is that the supply of necessary medical aid is guaranteed.

In view of these considerations liberal provisions for adequate medical and surgical aid might be expected with gratifying uniformity in the various American acts. As a matter of fact the direct opposite is true. The limitations placed upon this form of compensation are many, as Table I will demonstrate.

The essential limitations are those of the length of time during which medical aid[3] must be given and also the money limit placed upon its cost in each individual case. There are other limitations and qualifications dealing with the scope of what might properly be classified under medical and surgical aid, but these are reserved for subsequent discussion at length.

Taking the acts passed up to the end of 1916 and in force at present, the essential provisions of the compensation acts as to medical and surgical aid are given in Table I.

The evidence of lack of uniformity is conclusive, the existing variety of provision quite bewildering. Certain types or degrees of liberality in providing medical aid may, however, be ascertained, and these types can be brought out better by arranging the laws in force (omitting the earlier and superseded laws) in line according to the amount of medical aid furnished.

In view of the existence of two different limits, the money and the time limit, even such an arrangement offers some difficulties. Which offers more to the seriously injured workmen: Wisconsin, which grants medical aid for 90 days irrespective of its cost,

[1] Germany, Hungary, Luxemburg, Norway.

[2] Austria, Russia.

[3] For purposes of brevity the term "medical aid" will be used when medical and surgical aid, hospitals, drugs, etc., are meant. The importance of "etc." will be considered at greater length presently.

TABLE I

State or Territory	Date of Enactment of Law	Date in Effect	Time Limit for Medical Aid	Money Limit for Medical Aid
Alaska	April 29, 1915	July 28, 1915	No medical aid	
Arizona	June 8, 1912	September 1912	No medical aid, except cost of last sickness in fatal cases	
California	April 8, 1911	September 1, 1911	90 days	$100
California	May 26, 1913	January 1, 1914	90 days	No limit
California	May 8, 1915	August 8, 1915	No limit*	No limit
Canal Zone	March 20, 1914	April 1, 1914	No limit	No limit
Colorado	April 10, 1915	August 1, 1915	30 days	$100
Connecticut	May 29, 1913	January 1, 1914	30 days	No limit
Connecticut	May 20, 1915	May 20, 1915	No limit	No limit
Hawaii	April 28, 1915	July 1, 1915	14 days	$50
Illinois	June 10, 1911	May 1, 1912	56 days	$200
Indiana	March 8, 1915	September 1, 1915	30 days	No limit
Iowa	April 18, 1913	July 1, 1914	14 days	$100
Kansas	May 14, 1911	January 1, 1912	No medical aid except cost of last sickness in fatal cases	
Kentucky	March 4, 1914	Declared unconstitutional	No limit	$100
Kentucky	March 23, 1916	August 1, 1916	90 days	$100
Louisiana	June 18, 1914	January 1, 1915	14 days	$100
Maine	April 1, 1915	January 1, 1916	14 days	$30†
Maryland	April 16, 1914	November 1, 1914	No limit	$150
Massachusetts	July 28, 1911	July 1, 1912	14 days	No limit
Massachusetts	June 25, 1914	October 1, 1914	14 days‡	No limit
Michigan	March 20, 1912	September 1, 1912	21 days	No limit
Minnesota	April 24, 1913	October 1, 1913	90 days	$200§
Montana	March 8, 1915	July 1, 1915	14 days	$50
Nebraska	April 21, 1913	November 17, 1914	21 days	$200
Nevada	March 24, 1911	July 1, 1911	No medical aid, except cost of last sickness in fatal cases	
Nevada	March 15, 1913	July 1, 1913		
Nevada	1915	July 1, 1915	120 days	No limit
New Hampshire	April 15, 1911	January 1, 1912	No medical aid, except cost of last sickness in fatal cases	
New Jersey	April 4, 1911	July 4, 1911	14 days	$100
New Jersey	April 1, 1913	April 1, 1913	14 days	$50
New York	December 16, 1913	July 1, 1914	60 days	No limit
Ohio	January 15, 1911	January 1, 1912	No limit	$200
Ohio	March 14, 1913	January 1, 1914	No limit	$200
Oklahoma	March 22, 1915	September 1, 1915	15 days	No limit
Oregon	February 15, 1913	July 1, 1913	No limit	$250
Pennsylvania	June 2, 1915	January 1, 1916	14 days	$25–75**
Porto Rico	April 13, 1916	July 1, 1916	56 days	No limit
Rhode Island	April 29, 1912	October 1, 1912	14 days	No limit
Texas	April 16, 1913	September 1, 1913	7 days	No limit
Vermont	April 1, 1915	July 1, 1915	14 days	$75
Washington	March 14, 1911	October 1, 1911	No medical aid	
West Virginia	February 22, 1913	October 1, 1913	No limit	$150
West Virginia	February 20, 1915	May 21, 1915	No limit	$150–$300¶
Wisconsin	May 3, 1911	May 3, 1911	90 days	No limit
Wyoming	February 27, 1915	April 1, 1915	No medical aid	
United States	May 30, 1908	August 1, 1908	No medical aid	
United States	September 7, 1916	September 7, 1916	No limit	No limit

* "Within 90 days thereafter, unless such time is extended by the commission" (sec. 15*a*).

† "Unless in case of major operations being required" (sec. 10), when larger sum may be allowed by the commission.

‡ "And in unusual cases, in the discretion of the board, for a longer period" (sec. 5., amended sec. 1, chap. 708, Act of 1914).

§ " . . . . the court may upon necessity being shown therefor . . . . require the employer to furnish such additional medical, surgical, and hospital treatment and supplies during said period of ninety (90) days as may be reasonable, which together with any such sums or relief theretofore furnished shall not exceed in all two hundred dollars ($200) in value."

¶ " . . . . shall not exceed twenty-five dollars, unless a major surgical operation shall be necessary; in which case the cost shall not exceed seventy-five dollars" (sec. 306*e*).

** " . . . . in case an injured employee has sustained a permanent disability and it is the opinion of the Commissioner that the percentum of such disability can be reduced or made negligible by surgical or medical treatment, the amount expended for medical, surgical, and hospital treatment may be, but shall not exceed three hundred dollars in any case" (sec. 18 as amended by chap. 209, 1915).

or Oregon, which offers $250 worth of the doctor's work irrespective of the time it may take to absorb this fee?

Evidently no absolute, universally applicable rule can be formulated. Much depends upon the case and, one is tempted to add, upon the doctor. Where a difficult operation is required and an expert specialist must be called in, the $250 limit may be reached in one day. On the other hand, a lingering illness may require moderately priced medical aid given at intervals for a long time. It seems reasonable to assume, perhaps somewhat arbitrarily, that time limits will have a stricter limiting effect (and are therefore less desirable from the injured worker's point of view, though perhaps not from the physician's point of view) than money limits.

Accepting this hypothesis, therefore, the arrangement of the acts according to the amount of medical aid furnished is as shown in Table II.

Incredible as it may seem, there are no cases where more than two states grant exactly the same amount of medical aid, and the agreement of two state laws is very rare; according to Table II it is to be found only in the cases of Iowa and Louisiana (14 days and not over $100) and Montana and New Jersey (14 days and not over $50). As a matter of fact, even this slight degree of uniformity vanishes at a closer examination of the act. In Louisiana the period covered is "the first two weeks after the injury" and in Iowa it is "any time after an injury and until the expiration of two weeks of incapacity," which is materially fairer. The Montana provision differs from that for New Jersey by specifically authorizing the so-called hospital contracts (of which more later) in lieu of the medical benefit. The cost of this hospital contract is usually in part or in whole assessed against the wageworkers.

It would have been helpful if the arrangement of the various state acts according to the degree of liberality in granting medical aid, as given in the Table II, had brought out some tendencies evident upon simple inspection, but unfortunately this is not the case. For example, there are six states in which state compensation insurance has been established to the practical exclusion of stock insurance companies: Nevada, Ohio, Oregon, Washington,

West Virginia, and Wyoming.[1] In addition, stock companies are excluded from operating under the compensation law in the Canal

TABLE II

Time Limit	Money Limit	State	Act of
None	None	Canal Zone	1914
None	None	United States	1916
None	None	Connecticut	1915
None*	None	California	1915
None†	None	Massachusetts	1914
None	$250	Oregon	1913
None	150–300	West Virginia	1915
None	200	Ohio	1911
None	150	Maryland	1914
120 days	No limit	Nevada	1915
90 days	No limit	Wisconsin	1911
90 days	$200	Minnesota	1915
90 days	100	Kentucky	1916
60 days	No limit	New York	1914
56 days	No limit	Porto Rico	1916
56 days	$200	Illinois	1911
30 days	No limit	Indiana	1915
30 days	$100	Colorado	1915
21 days	No limit	Michigan	1912
21 days	$200	Nebraska	1913
15 days	No limit	Oklahoma	1914
14 days	No limit	Rhode Island	1912
14 days	$100	Iowa	1913
14 days	100	Louisiana	1914
14 days	75	Vermont	1915
14 days	50	Montana	1915
14 days	50	New Jersey	1913
14 days	50	Hawaii	1915
14 days	30	Maine	1915
14 days	25	Pennsylvania	1915
7 days	No limit	Texas	1913
No medical aid except cost of last sickness ...		Arizona	1912
		Kansas	1911
		New Hampshire	1911
No provision for medical aid at all.....		Alaska	1915
		Washington	1911
		Wyoming	1915

* See note (*), Table I.
† See note (†), Table I.

Zone, in Alaska, and under the United States Employees' Compensation act. What influence did that have upon the medical aid provision? Ohio, Oregon, and West Virginia are far at the

[1] As a matter of fact, in some of them, notably Ohio and West Virginia, stock companies were until recently enabled to compete indirectly with the state fund.

head of the list with medical aid unlimited in time, and with limits of $200, $250, and $300, but, on the other hand, Alaska, Washington, and Wyoming do not grant any medical aid at all, and this was also true of the systems provided for the employees of the United States government, until the act of 1916 was substituted for that of 1908.

Does the East or the Far West better recognize the necessity of thorough medical aid? Connecticut and California head the list, Washington and New Hampshire are its tail end. The six New England states are scattered throughout the list, and so are the states constituting other geographical zones of this country. Can any effect of the general degree of industrial development be recognized? It is perhaps significant that no industrially important state has entirely excluded medical aid, as Arizona, Kansas, New Hampshire, and Washington have done, but outside of that there is no uniformity between industrial Connecticut and Massachusetts at the head of the list, and industrial New Jersey and Pennsylvania very near the bottom.

Perhaps the only basis for generalizations is that of the year in which the act was passed. The year indicated in the last table is not always the original year of the enactment of a compensation law by the state, nor is it the year of the latest amendment, but it is the year of the act which established the standards of medical aid that still persist. It is significant, therefore, that of the first ten acts in the list only two date back to 1911 (Ohio and Wisconsin), while of the eight acts excluding medical aid altogether, or practically so, one was passed in 1908 (United States), four in 1911 (Kansas, Nevada, New Hampshire, Washington), and one in 1912 (Arizona). There are exceptions even to this rule: the early acts of Ohio and Wisconsin on the one hand, and the late acts of Montana, Maine, Pennsylvania, and Wyoming on the other; nevertheless this comparison seems to offer a better understanding of the problem. Outside of this element of time, the various provisions of the laws appear simply as capricious vagaries of thousands of ignorant legislators, not at all amenable to any law of social causation.

It is interesting, therefore, to trace the gradual evolution of the provisions for thorough medical aid in the history of the

American compensation movement. The total failure to appreciate the importance of it and to provide for it even in the slightest degree during the preliminary stages of enquiry and investigation is striking, especially in view of the fact that the movement for accident compensation started in this country only after some twenty years of European experience was available. The earliest experiment was the Maryland act of 1902.[1] No mention of the problem of medical aid for the injured is made in that act; and the same is true of the United States act of May 30, 1908, and the Montana act of 1909. When the states of New York, Minnesota, and Wisconsin appointed commissions for the investigation of the entire problem, the compensation movement for the first time acquired national importance. But in the discussion of the basic principles of the equity and constitutionality of the compensation idea, the problems of proper medical treatment of the injured were disregarded.

It may seem unreasonable to find fault with this; it may be argued that that early period was not at all adapted to the discussion of such details. And yet one might have expected that in the severe indictment of the employers' liability system such as every one of the early reports contains, and among the specific charges of insufficient compensation, wastefulness of the insurance premium, slowness of adjustment, and breeding of antagonism between employer and employee,[2] the failure of many injured to receive proper medical and surgical aid, the uncorrected fractures, the stiffened joints, the unprevented infections, and the inability to substitute a cork leg for the lost bone-and-flesh one might have been emphasized. Unfortunately no one outside of the medical profession was aware of these conditions, and the medical profession lacked the understanding of the social aspects of this problem.[3]

[1] See *Bulletin of the United States Bureau of Labor*, No. 45, p. 406, for the text of the act; *Bulletin No. 57*, p. 645, for an account of its operation.

[2] Report to the legislature of the state of New York by the Commission appointed, under chap. 518 of the Laws of 1909, to inquire into the question of employers' liability and other matters. *First Report*, Albany, 1910, p. 19.

[3] A noteworthy exception, which deserves to be recorded, is Dr. M. O. Lorenz's Compensation scheme, published during the period under consideration, which was faulty in many other respects, but did propose "in case of incapacity full medical aid"

We find, therefore, that the first national conference on compensation held in Atlantic City in the summer of 1909[1] failed even to mention the subject of medical aid. At that conference only the most general aspects, such as the "desirability, practicability, and constitutionality" of compensation were discussed. But from such generalities discussion rapidly turned to specific provisions. Nevertheless neither the second conference, in Washington (January 20, 1910),[2] nor the third, in Chicago (June 10–11, 1910), showed any greater appreciation of this problem. The Chicago conference even began the detailed consideration of a "Workmen's Compensation Code"[3] brought in by H. V. Mercer, chairman of the Minnesota Commission, but this code did not so much as mention medical aid, though several long sections were devoted to administrative details. The first general consideration of medical aid took place at the special Conference of Commissions held again in Chicago in November, 1910, at the request of the Massachusetts Commission, which was actively engaged in preparation of a bill for the consideration of the next session of the legislature of that state. At this meeting as many as eight state commissions, one federal commission, and one federal bureau were represented.[4]

Thirteen specific questions were submitted for painstaking discussion, but the question of medical aid was not one of them. It was injected, almost unexpectedly, into the discussion of "Question 6, the length of the waiting period," by Mr. George M. Gillette, member of the Minnesota Commission, who suggested that the labor representatives at the conference consider "a proposition of

("What Form of Workingmen's Accident Insurance Should Our States Adopt?" *Proceedings of the American Association for Labor Legislation*, Second Annual Meeting, 1909, p. 74). Dr. Lorenz's opinion remained a voice in the wilderness as far as practical legislation was concerned, except possibly in Wisconsin.

[1] See Atlantic City Conference on Workmen's Compensation, July 29–31, 1909.

[2] *Proceedings of the Third National Conference on Workmen's Compensation for Industrial Accidents*, Chicago, June 10, 1910 (brief report of the second national conference, held in Washington, January 20, 1910, printed as an appendix).

[3] *Ibid.*, pp. 40–43.

[4] *Proceedings of Conference of Commissions on Compensation for Industrial Accidents*, Chicago, November 10, 11, 12, 1910. Boston, 1910.

changing the waiting period from two to three weeks and, in lieu of that, furnishing hospital and medical attendance, and see what would be best." "To the average man," said Mr. Gillette, "that means a very great deal," and also it "is for the interest of the employer to see that that man from the very start of his injury has the very best sort of hospital care and surgical attendance. Otherwise, very serious consequences might flow from the ill care of injury." The brief discussion which ensued after this suggestion is worth reproducing in part as a very significant illustration of the character of our social legislation a few years ago:

MR. GILLETTE: If we could do both, if we could have two weeks and also give the surgical and medical attendance, I would like to see it done, but I don't believe we can do it within any reasonable limits. . . . .

CHAIRMAN (MR. MERCER): It would seem to me, after my experience in Europe, that it might be a business proposition from the employer's standpoint, to take care of the hospital bills and the doctor's bills during the first two weeks free of charge. I think he would make money out of it in the end.

MR. GILLETTE: But it is all an element of cost.

MR. GOLDEN (a labor representative): I believe, if any person gets injured, two weeks is long enough for us to wait for pay, and the very least the employer can do is to pay hospital and medical bills, whatever might be used on the man. Three weeks is too long . . . . they ought to receive hospital bills and medicine, and whatever stuff they need while they are sick the first two weeks, free of charge.[1]

Some progress had evidently been made in the United States in standards of labor legislation between 1910 and 1917, if in 1910 representatives of labor only dared to ask for medical aid during the two weeks' waiting period, while eight of the acts in force at present grant medical aid without any time limit and without any money limits.

In view of the modest demand put forth by Mr. Golden, representing labor, the Chicago conference went as far as it could have been expected to, by providing the following answer to question 6:

Length of waiting period? Two weeks, during which period employer shall furnish medical treatment or hospital care to an amount not exceeding $100 in value.[2]

[1] *Op. cit.*, p. 100.

[2] *Bulletin of the United States Bureau of Labor*, No. 90, September, 1910, p. 716.

In view of this lack of appreciation of the great importance of medical aid, the failure of the many early acts to provide for it adequately or at all need not appear strange. In the numerous reports of the state investigating commissions, which appeared at rapid intervals during the last few years, very little attention was paid to the question. But, amazing as it may seem, in several of them, even the more recent ones, there is not even the slightest reference to, or even mention of, the problem.[1] No reference at all is found in the purely optional Massachusetts act of 1909, which remained a dead letter, the similarly ineffective optional New York act of 1910, or the compulsory New York act of the same year (the Wainwright act), which was soon declared unconstitutional.

The avalanche of compensation acts began in 1911, ten acts having been passed in that year; of these, five went into effect during the same year, three on January 1, and two at later dates of the following year. The medical provision made by most of these acts on the whole was very meager.

Washington	None
Kansas, Nevada, New Hampshire	Only if injured employee dies, leaving no dependents
New Jersey	2 weeks, not over $100
Massachusetts	2 weeks
Illinois	8 weeks, not over $300
California	90 days, not over $100
Wisconsin	90 days
Ohio	Not over $200

Only four of the ten acts went beyond the standards outlined by the Chicago conference; two accepted them without much change, and four provided practically no medical aid at all, only four making provision that was more or less adequate. The situation fully deserves the scathing criticism of contemporary expert students. "Particularly unfortunate," says Dr. E. H. Downey, "is the consistent failure to provide adequate medical care for the injured—a type of benefit which probably yields larger returns, in proportion

[1] See *Colorado Report of Employees' Compensation Commission*, 1913; *Illinois Report of the Industrial Insurance Commission*, 1907; Iowa Employers' Liability Commission, 1912; *Louisiana Employers' Liability Commission Report*, 1914; *Maryland Employers' Liability and Workmen's Compensation Report*, 1913, etc.

to its cost, than any other form of accident relief."[1] And again, Dr. D. D. Lescohier, in the report of the Minnesota Bureau of Labor Industries and Commerce: "It is questionable if any American law, unless that of Wisconsin, furnishes medical relief to injured workmen. . . . . It is questionable if the Wisconsin law should not be amended to read that medical aid should continue until recovery was complete or as complete as would ever be probable."[2]

In at least one state, namely Washington, the matter was not settled without a serious struggle. The commission which prepared the draft of the compensation act (or at least some members of it, representing the interests of labor) recognized the importance of medical benefits in the scheme of compensation. But the exaggerated fear of the excessive burden which that might place upon the employer forced the commission to evolve an original plan of meeting this need. Sections 10 and 11 of the draft presented by the commission to the legislature proposed the organization of a First Aid Fund,[3] to which a contribution of "four cents for each day's work or fraction thereof done by each workman" would be made by each employer, one half of this amount to be deducted from the wages of this employee. From this First Aid Fund the sum of $5 per week was to be paid for a period not exceeding three weeks to meet the cost of medical, surgical, and hospital service. The language of the proposal did not make clear whether the first aid was to be limited to accidental injuries, or was to include all other diseases as well, but since the amount of payment was based upon the customary hospital fee of $1 per month, the presumption is that all illness was included. Nor was the meaning of the "three weeks" limitation quite definite, though probably the limitation referred to each individual case of sickness.

The authors of compensation legislation in the state of Washington have repeatedly expressed their pride in the courage with which that state embarked upon this novel and untried field of

[1] E. H. Downey, *History of Work Accident Indemnity in Iowa*, 1912, p. 145.

[2] *Thirteenth Biennial Report of the Minnesota Bureau of Labor, Industries, and Commerce, 1911–1912*, Part I, "Workmen's Compensation," by D. D. Lescohier and A. A. Garrison, p. 14.

[3] See John H. Wallace, "Compulsory State Insurance from the Workman's Viewpoint," *American Labor Legislation Review*, XI (November 1, February, 1912), 19.

social legislation, while the effete East was wavering and debating and investigating. In view of twenty-five to thirty years' experience in Europe, these references to the experimental character of compensation legislation do sound somewhat odd. How many gross errors some judicious investigation could have prevented is amply demonstrated by this First Aid Fund plan. In Massachusetts, where medical aid for two weeks without limit of cost was given from July 1, 1912, to October 1, 1914, the average cost per $100 of pay-roll amounted to some $8\frac{1}{2}$ cents. Even assuming an average wage of $1,000 (a preposterous assumption of course), the annual cost amounts to some 85 cents per wageworker. Yet in order to grant the petty amount of $15 (utterly inadequate, because satisfactory medical aid and hospital service cannot be purchased for $5 per week, especially in case of surgical conditions), it was intended to collect $12 per annum for each worker and charge half of it to the worker's wages. No wonder that opposition to this plan developed on both sides. "It was opposed," says Mr. Wallace, "through fear that state supervision of hospital treatment would result in the upbuilding of a political machine for administration and in the location of state-built hospitals . . . . it was opposed because it was argued that this was a daring piece of social legislation [*sic!*] and would be sufficiently cumbrous for the first two years of its experimentation without the burden of the first-aid feature and the close supervision and weekly payment of bills required." For these and other reasons the First Aid Fund feature was eliminated; and, be it further noted, after four years of experience compensation in Washington still lacks its medical benefit.[1]

The even year 1912 was an off year in legislative work. Only three acts were added to the list—those of Arizona, Michigan, and Rhode Island—and only one of these failed to make provision for medical aid. Of the other two, Rhode Island followed the Massachusetts standard in this as in almost all other provisions of the compensation system, while Michigan went a step beyond the conference standards by extending the medical benefit to three weeks.

A large number of compensation acts were passed in 1913. Disregarding amendments of older acts, and even the passing of

[1] See note at end of article.

entirely new acts in states already having some compensation act on their statute books (as in California, Ohio, and Wisconsin), eight states were added to the lists. The progress of the movement for adequate medical benefits is evidenced by the fact that not a single one of these eight acts waived medical benefits entirely. The provisions made were as follows, in an ascending scale:

Texas	1 week, No money limit
Iowa	2 weeks, $100 limit
Nebraska	3 weeks, $200 limit
Connecticut	30 days, No money limit
New York	60 days, No money limit
Minnesota	90 days, $100 limit
West Virginia	No time limit, $150 limit
Oregon	No time limit, $250 limit

Again, in 1914, only three new acts were passed, those of Kentucky, Louisiana, and Maryland, of which the first was declared unconstitutional.[1] Considering that all three are southern states, in which standards of social legislation are characteristically lower (of the sixteen states still remaining after January 1, 1917, outside of the domain of compensation legislation, twelve are to be found among the eighteen southern states), it is doubly significant that only Louisiana preserved the Chicago conference standard of two weeks with a $100 limit, while the Kentucky act (later declared unconstitutional) offered medical aid up to the cost of $100 and Maryland provided for aid up to $150 without any time limit.

In 1915 ten more states and territories fell into line: Alaska, Colorado, Hawaii, Indiana, Maine, Montana, Oklahoma, Pennsylvania, Vermont, and Wyoming.

Alaska	No medical aid
Wyoming	No medical aid
Pennsylvania	14 days and $25 ($75) limit
Maine	14 days and $30 limit
Hawaii	14 days and $50 limit
Montana	14 days and $50 limit
Vermont	14 days and $75 limit
Oklahoma	15 days and no limit
Colorado	30 days and $100 limit
Indiana	30 days and no limit

[1] In addition compensation was established for the government servants in the Canal Zone by presidential decree.

Here our hypothesis, so strongly supported by the development up to 1914, seems to break down: without any exceptions the *new* acts passed in 1915 have skimped in the matter of medical aid, and most of them went below the lower limits of earlier legislation. While it is a matter of some satisfaction that only two acts, and those of industrially insignificant states like Alaska or Wyoming, failed to provide for medical aid altogether, none of the others went beyond 30 days, and as a matter of fact only two so far have done so; the other five states followed the New Jersey standard in the matter of time limits, and most of these added extremely low money limits as well.

Finally, in 1916 only two new acts were placed on the statute books, in Kentucky (in place of the act of 1914 declared unconstitutional) and in Porto Rico. Both acts provided fairly liberal amounts—90 days with a $100 limit and 56 days without any limit.[1]

What explanation may be advanced for the seeming reversion to older standards which manifested itself so strongly in 1915? One is that the very delay until 1915 before passing a compensation act indicates a powerful opposition, a certain disregard of the interest of the wageworker, which expressed itself in the adoption of very low compensation benefits, including that of medical aid. That may seem true of Pennsylvania and Colorado. Of the remaining states, none is of great industrial importance, and agricultural localities cannot be expected to lead in industrial legislation. There may be another explanation in the general spread of fear lest the cost of medical aid become excessive, resulting from a rather superficial analysis of the experience of those states where compensation had been in operation for some time.

But much more significant is the tendency to increase the amount of medical benefit in the latter states. Of the 37 compensation systems now on the statute books of the country at this writing (December, 1916), five went into effect within the last twelve months, ten had been in force from one to two years, six from two to three years, three from three to four years, seven from four to five years, and six for five years or slightly over, the average

[1] See note at the end of article.

age of the compensation systems in force being about three years and three months.[1] Nevertheless the amount of amending already done is considerable though only a small part of the amendments proposed actually succeeds in going through the numerous legislative stages.[2] With one or two exceptions, the acts of all states have been amended as frequently as their legislative sessions would permit. The frequency of these amendments is largely explained by the haste and inexpert draughtsmanship of the original enactments. Nevertheless it is a rather hopeful sign of willingness to correct errors committed. Most of these amendments deal with administrative details, but here and there the essential features of the system, such as the compensation scale, have been modified, and of these, most frequently the medical benefit.

The original Roseberry act of California (1911) allowed medical aid for 90 days under a limit of $100. The Boynton act of 1913 eliminated the $100 limit, and the amendment of 1915 did away with the 90 days' limit, at least in the gravest cases, by providing that this time may be extended by the Industrial Accident Commission. Furthermore it extended the scope of medical and surgical aid by including artificial limbs.

The Connecticut act of 1913 limited its medical aid to 30 days. An amendment of 1915 abolished all limits whatsoever. The original Massachusetts act of 1911 adopted the narrow New Jersey limit of 2 weeks. But the serious hardship in severe injuries caused by this limit soon became so obvious that in response to a strong recommendation of the Board[3] the act was amended in 1914 to require medical aid to be granted "in unusual cases, at the discretion of the board, for a longer period" (sec. 1, chap. 708, Acts of 1914, June 25, 1914). While the actual effect of this amendment is somewhat uncertain, owing to many possible interpretations of the phrase "unusual cases," and the uncertainty of the

[1] In fact, some of the acts were so radically changed, and in their earlier form had such limited application (California, Wisconsin, Ohio, etc.) that in reality the average age of the acts in force is very much shorter—nearer to two years and eight months.

[2] A card catalogue of compensation legislation, admittedly incomplete, contains at this time nearly 110 entries.

[3] Industrial Accident Board, *First Annual Report, 1912–1913*, p. 41.

character of the board's "discretion," the intent of the amendment is obvious. As a matter of fact, the number of cases where medical aid is wanted beyond 2 weeks will not exceed 20 per cent, but that would be a rather liberal interpretation of the word "unusual."

The West Virginia act of 1913 established the liberal standard of no time limit and a money limit of $150. Nevertheless the amended act of 1915 further provided that "in case an injured employee has sustained a permanent disability and it is the opinion of the commissioner that the percentum of said disability can be reduced or made negligible by surgical or medical treatment" the amount may be raised to $300. Perhaps a heartless consideration, brutally put, but nevertheless an evidence of progress. Still more significant are the very liberal provision for medical and surgical aid in the Kern-McGillicuddy act of 1916, providing compensation for the employees of the United States Government and replacing the Alexander act of 1908 in which no provision for medical aid was made, and the amendment of 1915 to the Nevada act of 1913, for the first time providing medical and surgical services.

Not only these various enactments, but very definite statements from the administrative authorities clearly show that experience amply demonstrates the advantages of thorough medical attention. Thus, as early as 1913, the California Industrial Accident Board was of the opinion that "the first and best compensation that can be afforded to an injured workman is to place at his disposal the best skill of medical and surgical science of his time, for the purpose of restoring him as nearly as possible to the physical condition he was in before he was injured. This, we have reason to fear, will not always be done under the existing $100 limitation placed upon the employer and the insurance carrier by the law. Therefore, we ask that that limitation be removed and full medical and surgical attendance be required."[1]

In 1914 the Massachusetts Industrial Accident Board requested "that the legislature give the Board the power to require the payment of bills for medical and surgical treatment, medicines, medical and surgical supplies, crutches and apparatus, when

[1] California Accident Board, *First Annual Report*, 1913, p. 13.

necessary beyond the first two weeks after the injury in unusual cases where the injury is so serious as to require and warrant such additional medical treatment,"[1] because "there is no doubt that if the injury continues more than two weeks the medical attention provided is not sufficient to keep the employee from being a subject of charity."[2] The emphasis upon the fact that the Massachusetts medical benefit "is less than most of the other states have provided" is an excellent argument of the advantages of lack of uniformity as proving a stimulus to the less progressive states.

Even the New Jersey Commission, "appointed to observe the operations of the law" without any power to correct evils, has reached the conclusion that at least in exceptional cases there should be provision for appeal to court for additional medical services.[3] In view of this development it is sufficient to refer to the change made in the New Jersey act by the amendment of 1913 (chap. 174, Acts of 1913) in reducing the maximum medical benefit from $100 to $50. In the brief history of compensation in this country this as yet remains the only example of a reduction on an important scale.

That in most states the limits are sufficiently low to strike a perceptible proportion of cases of injury is self-evident. All injured persons do not recover within two weeks. But exactly what proportion of cases is affected? No direct statistical answer to this question on the basis of American data is available, for the effects of the benefit scales of the American laws have not yet begun to be studied. But the assumption seems justifiable that rarely will medical aid be necessary beyond the period of temporary disability, e.g., that even in cases of permanent results the conclusion of the period of temporary disability as a rule indicates also the conclusion of all medical treatment. Scattered American data as to the distribution of accidents according to the duration of disability are available for a few states, but their comparative value is impaired by the difference in the number of lighter accidents

[1] Massachusetts Industrial Accident Board, *First Annual Report*, Boston, 1914, p. 51.

[2] *Ibid.*, p. 50.

[3] *Report of (New Jersey) Employer's Liability Commission for the Year 1914*, p. 8.

included.[1] It seems preferable, therefore, to make use of the distribution of accidents according to severity as indicated in the "Standard Accident Table" constructed by the author as a basis for compensation rates.[2] According to this table, and using only "tabulatable" accidents (accidents causing disability on some other day besides the day of accident) as a basis, the number of cases, out of 100,000, in which the period of temporary total disability has not expired is:

After	7	days	62,504
"	14	"	38,218
"	21	"	25,792
"	28	"	18,479
"	56	"	6,043
"	91	"	2,204

The difference in medical services provided by different types of acts is therefore very substantial. In Texas some two-thirds of all injured must be affected; in New Jersey, Massachusetts, and seven other states adopting the 2-week standard, a great many more than one-third of the accidents, in fact nearly two-fifths; in Michigan and Nebraska, over one-fourth; in Indiana and Colorado, somewhat more than one-sixth.[3] But it must be remembered

[1] For instance, if all accident notices, no matter how slight, are included, as in Massachusetts, the proportion of serious accidents will be correspondingly reduced. On the other hand, in Wisconsin only compensatable accidents (i.e., those over one week's duration) are included.

[2] See "Standard Accident Table as a Basis for Compensation Rates," *Publications of American Statistical Association*, March, 1915. Also Spectator Co., New York, 1915.

[3] To some extent these proportions may be increased by the peculiar wording of the law. In New Jersey, e.g., the medical benefit is limited to the "first two weeks *after the injury*," which has been interpreted to mean the day of the accident. Not infrequently, however, the disability, or suffering, begins some time after the injury, and the period of medical aid is correspondingly reduced. Numerous instances of real distress due to this one cause are described in the investigation of the New Jersey law made by the American Association for Labor Legislation ("Three years under the New Jersey Workmen's Compensation Law," pp. 33–37). The following case offers a good illustration: "Paul R. had his toe crushed in a stove foundry. The company applied first-aid treatment, but did nothing further; more than two weeks later infection set in and the man was obliged to spend nearly six weeks in a hospital. The employer was not required to pay the hospital bill of $33.25 or the medical bill of $12, since they were contracted after the first two weeks." See also cases No. 154 and No. 259. Nevertheless, in most states the same perfectly purposeless limitation

that this smaller share of accidents affected by the time limit represents the severe injuries, where both the economic loss and physical suffering are greatest.

When the limit is kept up at 8 weeks or 60 days, the number of accidents represented is very much smaller—only about 6 per cent, and only a little over 2 per cent may still need medical attention after 13 weeks have expired. Of course this rapid reduction of the number of accidents as the higher limits are reached suggests that the cost of further extensions must rapidly decrease, i.e., that it probably cost more to extend the limit from 1 week to 2 weeks than from 28 days to 90 days. The question of cost is reserved, however, for subsequent fuller consideration.

The accuracy of the statistical measurement here ventured must be materially affected by the money limits, which must (as they are intended to do) occasionally stop the supply of medical aid before the time limit has expired. As to that, still less information is available outside of the interesting data published by the Ohio Industrial Commission,[1] of awards made from March 1, 1912, to June 30, 1914, which are given in Table III: The Ohio act has no time limit to its medical benefits. Nevertheless the number of cases calling for large amounts of medical aid is extremely small. Only 1.2 per cent of the cases cost over $50 for medical aid during the period March, 1912, to December, 1913; and though in the later period there seems to have been a general rise in the cost of

exists (Connecticut [old act], Indiana, Louisiana, Maine, Massachusetts [old act], Michigan, Minnesota, Montana, Nevada, New Jersey, New York, Oklahoma, Rhode Island, and Texas). In other states (California, Colorado, Hawaii, Illinois, Iowa, Kentucky, Nebraska, Pennsylvania, Porto Rico, Vermont, and Wisconsin) the time limit is expressed in terms of duration of disability and is not dated from the time of injury. The Colorado act contains the very explicit language: "from the day the employee leaves work as the result of the injury." In Massachusetts the injustice of this section in the act of 1911 became so evident that upon recommendation of the Board (*First Annual Report*, p. 41) the language was amended in 1914. In Michigan and some other states the situation was met by decisions of boards and commissions. The situation offers an eloquent illustration of the great importance of expert bill drafting. In the latter formula the question of medical and surgical aid in case of an injury which does not result in disability might still be raised, though the writer is not aware of any cases of this character.

[1] *Ohio Industrial Commission*, Department of Investigation and Statistics, *Reports 2* and *4*.

medical aid, the proportionate number did not rise much above 2 per cent. The table also indicates what might have been surmised, that a larger proportion of these cases calling for costly medical aid occurs among the permanent-disability cases. The peculiar significance of this fact will be referred to later. The higher money

TABLE III

DISTRIBUTION OF MEDICAL AWARDS BY AMOUNT IN OHIO

Amount of Award	Fatal Cases	Permanent Disability	Temporary Disability Over 7 Days	Temporary Disability under 7 Days	All Cases
	March 1, 1912—December 31, 1913				
Under $ 5.	5	6	1,075	6,811	7,897
$ 5– 10.	5	25	1,535	1,252	2,817
10– 25.	4	130	1,248	199	1,581
25– 50.	8	50	244	13	315
50– 75.	3	22	49	1	75
75– 100.	1	10	18	.....	29
100– 150.	1	9	14	1	25
150– 200.	1	7	10	.....	18
200.....	2	7	4	.....	13
Total....	30	266	4,197	8,277	12,770
	January 1, 1914—June 30, 1914				
Under $10...	25	50	4,990	8,099	13,164
$10– 15...	14	191	2,395	246	2,846
25– 50...	17	90	494	.....	601
50 and over.	16	107	233	.....	356
Total ...	72	438	8,112	8,345	16,967

limits, as shown in Table III, affect very few cases indeed. Thus, granted a medical benefit unlimited in time (the first nine states in Table II), only four cases out of a thousand will be affected by a money limit of $100, only two out of a thousand by a money limit of $150, as in Maryland, and only one in a thousand by a limit of $200.

The lower limits of $75, $50, $30, or even $25 cut somewhat more deeply into the amount of medical aid which otherwise would be furnished, since some 5 per cent of cases for the entire period of 26 months called for medical aid at a cost of over $25. It is

reasonable to assume that only a small number of these cases were such that the 2 weeks' limit would not have exerted its influence long before the money limit.

Of course the length of time for which medical aid is allowed and the money limit placed upon its value indicate only the quantity and not the quality or kind of aid allowed. "Medical and surgical aid" is an elastic term. The effort to cure or at least minimize the physical results of an injury may call for various forms of expenditure. In this respect greater uniformity may be observed, the exact language of the acts in respect of medical aid following certain customary formulae.[1] As a broader provision, the formula of the Wisconsin act of 1913 may be quoted: "Such medical, surgical, and hospital treatment, medicines, medical and surgical supplies, crutches, and apparatus, as may be reasonably required at the time of the injury and thereafter during the disability . . . . to cure and relieve from the effects of the injury." This formula is reasonably complete. It repeats the formula of the earlier act of 1911, except that the word "hospital" has been added in the first line. But it is doubtful whether this addition is of great importance, for evidently, in cases requiring hospital care, the provision of the law granting medical and surgical treatment would not have been fulfilled unless hospital care was added. Substantially the same language is found in the acts of California and Minnesota. Closely allied is the formula of the New York act, followed by those of Maryland and Oklahoma: "such medical, surgical, or other attendance or treatment, nurse and hospital services, medicines, crutches, and apparatus as may be required or be requested by the employee" (sec. 13). This goes beyond the Wisconsin formula by specifying "other attendance," which may be interpreted to mean such specialties as orthopedic or dental work, though by construction all of it may be included under surgical treatment. Nurse service is also enumerated. When treatment is given in a hospital, this specific reference is evidently unnecessary; the term presents a certain danger of stimulating claims for nursing from members of family, the payment of which

[1] On the whole it is quite a significant feature of the compensation laws that there is much more uniformity in the language than in the substantive provisions.

is hardly intended in the compensation act. Yet the occasions must arise when hospitals are not within reach and hired nurses may be necessary. If strict interpretation of the word of the law were always the rule, then the Wisconsin formula would have its advantage to the injured, because it clearly states that the medical benefit must be granted, not only "to cure" (which is in the interest of employer), but also "to relieve" the injured person, even if incurably injured. But it is evident that "necessary" medical aid should include both.

The broad character of the Wisconsin formula is fully recognized by the officials of that state. In the text of the act of 1913 issued by the Wisconsin Industrial Commission the following comment is made concerning the provisions for medical aid:

> This provision of the Wisconsin law is more liberal to the injured workman than that of any other compensation act. The provision must be construed liberally to carry out its humane purpose, but it must not be abused. So far the expense under this provision has been about 50 per cent of compensation, or one-third of the total cost. It should not be understood that this expense is without substantial benefit to the employer. Where the injured workman receives full and competent medical attendance he is able to return to work sooner, and many injuries which might otherwise result very seriously are quickly cured and compensation ceases. Under our act the cost of medical attendance is high, but there should be, and we think there is, a corresponding saving in compensation. At any rate the provision is humane and just. It is little less than criminal to cut off medical attendance at the expiration of two weeks, or limit the cost to $100, as is done in some acts. Only those with minor injuries are covered by such a provision, and those most seriously injured are cut off at a time when help is most needed.

The essential feature of both these formulae which distinguishes them from those of other acts is the definite statement concerning crutches and apparatus. Of the importance of these when they are needed little need be said. The number of cases calling for them must necessarily be small, if we remember that according to the standard accident table, 94,193 cases out of 100,000 result in temporary disability only, and that even of 4,875 cases of dismemberment only a few are sufficiently serious to call for such apparatus. The collective cost of such aid to recovery must be small, but in individual cases it must be considerable and beyond

the means of the injured. It is significant, therefore, that the California act was amended in 1915 to include "artificial limbs"—as yet the only act that goes so far.

The New Jersey formula, followed by a large number of states, is much briefer and very much restricted, reading "reasonable medical and hospital services and medicines, as and when needed." This formula is reproduced exactly in eight states[1] and with very slight modifications in sixteen others.[2] It quite definitely excludes any apparatus or crutches. Medicines or supplies are omitted in many of the latter acts. In some states, again, the administrative commissions were forced to go beyond the provisions of the law. Thus the Massachusetts Board ruled[3] that "necessary carriage hire, crutches, trusses, etc., if furnished during the first two weeks after the injury, come within the meaning of reasonable medical and hospital services and medicines."

In this brief analysis the different time and money limits have been disregarded. But it is quite evident that the two methods of provision are closely related. Specific reference to crutches or apparatus would probably mean very little where the maximum limitation is $25, $30, or even $50. Even the time limits would have the same effect, for crutches or most other apparatus, and often even glasses, could not be fitted in an injury of any degree of severity before the expiration of the time limit.

In order to permit the purchase of an artificial limb, both the time limit and the money limit would have to be materially raised if not abolished altogether. But no matter how expensive artificial limbs may be, the cost of the provision would depend entirely upon the frequency with which this necessity might arise. According to the same "Standard Accident Table"[4] the cases of loss of leg, arms, or hand are only 402 out of 100,000 accidents, or one in 250.

[1] Louisiana, Maine, Massachusetts, Michigan, Nebraska, Pennsylvania, Rhode Island, and Texas.

[2] Canal Zone, Colorado, Connecticut, Hawaii, Illinois, Indiana, Iowa, Kentucky, Montana, Nevada, Ohio, Oregon, United States, Vermont, Kentucky, and West Virginia; nurse services are especially mentioned in several states.

[3] Massachusetts Industrial Accident Board, *Bulletin No. 2*, January, 1913. Decisions and rulings, p. 10.

[4] *Op. cit.*, p. 21.

It is evident, therefore, that to some extent the low money limits, and to a very much larger extent the time limits, cause the medical benefit to be discontinued in grave cases when the injured is imperatively in need of it. The situation may be met in one of three or four different ways:

1. The injured person may remain without adequate medical aid, or be obliged to leave the hospital too soon, or forego the necessary operation, or remain without the necessary apparatus, thus incurring much suffering that might be prevented, and also interfering with the greatest possible restitution of earning capacity.

2. He may be able to purchase the necessary amount of medical aid. In the majority of cases, however, this will be done at the expense of the very modest standard of living for himself and dependents which the compensation-benefits scales provide. It must be remembered that, with some exceptions, low medical benefits are found side by side with a low compensation scale of 50 per cent and a waiting period of 2 weeks. The immediate effect of the accident is to cut off the weekly income. There is no pay envelope for two weeks, but meanwhile medical aid is furnished either at home or in a hospital, and the family is forced to draw upon its savings, if there are any, or to go into debt. By the time the medical benefit reaches the limit, the economic status of the family may be seriously impaired, yet another week at least must elapse before the first compensation benefit, amounting to half the weekly pay, is received. That the necessity of meeting additional medical or hospital charges under these circumstances must be a hardship need hardly be argued.[1]

3. The injured person may fall back upon charitable aid, by applying to a free public medical institution. This is likely to be the most frequent way out of the difficulty. Assuming that public institutions are easily available, all the necessary medical

[1] For a few illustrative cases see the report of the American Association for Labor Legislation in "Three Years under the New Jersey Workmen's Compensation Law" (*American Labor Legislation Review*, V, No. 1.), especially pp. 64–68: case 13, totally disabled for 24 weeks, compensation $5.40 per week, medical bill $85 ($35 over the limit); case 103, amputation of thumb, medical expenses $125 ($75 over the limit); case 114, loss of an eye, compensation $674.36, medical expenses $241.35 ($191.35 above the limit).

attendance may be obtained in this way. But the objections to this method are obvious. It goes contrary to all the theory underlying compensation legislation: it forces the injured person to become a pauper, and places upon public charitable funds the burden which, according to the theory of compensation, should be carried by industry. Again, it demands from the medical profession an amount of gratuitous service which physicians are inclined to resent more and more, now that they have become alive to the possibilities of accident compensation.[1]

4. The employer, or the insurance carrier acting for him, may voluntarily furnish the additional medical attendance necessary over and above the law, even including crutches, apparatus, and artificial limbs. This happens much more frequently than the public outside of the insurance circles is aware.[2] The writer has no intention of holding a brief for the insurance companies. This additional voluntary service (which has become sufficiently important to justify the coining of a trade term "non-statutory medical aid") is not granted out of any philanthropic considerations such as may influence the individual employer to assume the cost, or,

[1] "One hospital, which is forbidden by its charter to charge for its services, estimated that it treated three-quarters of all the work accidents occurring in the city in which it was located. Another hospital stated that it usually received nothing for services required out of the amount provided by the act."—"Three Years under the New Jersey Workmen's Compensation Law," p. 18. See also the following cases in the same report on New Jersey: case 88, 5 weeks in hospital, only 2 weeks paid for; case 80, 10½ weeks in hospital, only 2 paid for; case 253, medical attendance was required for 4 months, including two operations; only 2 weeks paid for. "The average time in the (Newark City) hospital for 44 non-fatal cases was twenty-four days. Of these cases . . . . 16 remained over 30 days, 3 over 60 days, and 2 over 90 days. In 25 cases of fractures which could be identified as due to work accidents, the average time in the hospital was 37 days" (p. 66). "One large New Jersey hospital estimated . . . . that the medical expenses of about one-fifth of these were not entirely covered by the law. In probably the majority of instances necessary medical attention beyond the legal allowance has been given free by doctors or hospitals or paid for by charitable organizations" (p. 68).

[2] "In many cases the employers and insurance companies are paying a larger amount than that fixed by the statute. As a rule, this additional expenditure is made for the purpose of facilitating the recovery of the workman so as to reduce the amount payable for recovery" (American Federation of Labor and National Civic Federation, *Workmen's Compensation Report upon Operation of State Laws*. Sixty-third Congress, Second Session, S. Doc. 419, p. 31).

even more frequently, convince him that the assurance company should assume the cost.[1] These expenditures for "non-statutory aid," for employing an expert surgeon to operate, or a high-priced specialist to make a diagnosis, for taking X-ray photographs, or even buying an artificial limb, are carefully weighed with the cost of the service, carefully balanced against the possible saving in compensation. In one case in California the employer who granted medical aid beyond the 90 days' period endeavored to deduct the cost from the amount of compensation due. He was overruled by the commission, which declared it contrary to the law (*Paul W. Cypher* v. *United Development Co.*, October 10, 1914). The following actual case quoted in an official California report aptly illustrates this situation:

One such case came under the observation of this Board in which the crushing of one leg below the knee necessitated either the amputation of the injured member or the transference of sound bone from the uninjured leg to the injured one and its grafting into the broken fragments, a process that required several months of surgical attention and hospital treatment. Fortunately, the latter course was pursued and both legs were made nearly as good as new, but the surgical and hospital expense totalled $1,000, whereupon the balance sheet stood as follows under the California law:[2]

Amputation of leg, maximum liability of employer under present law....	$ 100.00
Temporary total disability, 5 weeks at $16.90 per week, the weekly wage being $26.....	84.50
Permanent partial disability at 60 per cent of total, 391 weeks at $10.14.	3,965.50
Total cost to employer under limited medical attendance.....	$4,150.00
Medical, surgical, and hospital expense.....	$1,000.00
Temporary total disability, 26 weeks at $16.90.....	439.40
Permanent partial disability, 10 per cent for 754 weeks.....	1,274.25
Total cost to employer.....	$2,713.65

That is, in this case full medical attendance meant a saving of about $1,400. While this may serve as a very grateful evidence of the social value of enlightened self-interest, there are several reasons

[1] Complete protection through insurance has often a wonderful influence upon the employer in making him recognize the rights of the injured employee.

[2] Memorandum concerning a proposed scale of compensation benefits to be paid to workmen injured through industrial accident now under consideration by the Industrial Accident Board of California (1912?).

why it does not offer an altogether satisfactory solution of the difficulties:

It is one thing to shape legislation so as to make use of this economic motive to obtain socially desirable results, and quite another to depend upon it exclusively to accomplish what is desirable. The average adjuster of claims may not be enlightened enough to see the far-reaching results of such liberal medical treatment, and the stimulus to keep the medical cost down to the lowest legal limit must in most cases be overwhelming.

Moreover, one would scarcely want to depend entirely upon someone else's economic motive for the preservation of health and limb, nay, even life.[1] The explanation for all these strict limitations upon the amount of medical aid is obviously the desire to keep down the cost of medical aid as one of the methods of keeping down the cost of compensation. That this was perhaps the most unwise direction the employer's economy could take will be shown later, when the effects of these limitations are studied. But it is still more difficult to understand the curious theory of a "compensation fund" similar to the old "wage-fund theory" of the classical economists which gained considerable popularity for a time. When, for instance, the $25 limitation was first proposed in Pennsylvania, the representatives of organized labor felt that "it will be rather severe for the average man to be laid up for two weeks without pay and with only $25 for the doctor's bill, especially if the accident is a serious one. But if, as the result of this concession, he is able to get a little more money for the more serious accidents, and

[1] In one case with which the writer is personally familiar—a very bad compound comminuted fracture of the femur (fracture of the shaft bone of the leg at several places with crushing of parts of bone and exposure of the injured bone to the surface through laceration of muscles, an especially serious complication)—the injured person was in the hospital 16 weeks, i.e., 8 weeks after the legal limit for medical aid under the New York Compensation law. His condition at the time was serious, and even dangerous to life. The question, how much more money should be spent for hospital care and operations, possibly amputation, was seriously discussed by the insurance company. In this discussion the probable cost of compensation for an amputated leg and even for death were carefully considered. Fortunately for the man, the presence of a young wife and two young children made the cost of compensation for death very heavy and was used as an argument for the most liberal allowance to save the man's life. But supposing he had been an altogether unattached individual?

especially a life pension if he is totally crippled, the sacrifice will seem well worth while."[1] The representatives of organized labor evidently assumed that satisfactory treatments of both features were mutually exclusive. Needless to say, Pennsylvania labor did not get the more liberal treatment of severe injuries, because of this complacent attitude.[2]

Another potent factor was the exaggerated fear of "medical graft." An experienced casualty man and prolific writer on compensation expressed the opinion that "the medical feature of the law will always cost more to employers than all other features of the law."[3] Of course this statement represents a gross exaggeration. As a horrible example the French compensation law is cited, which is designated as the "Doctor's Graft Law."[4] The workmen are said to be "taking money out of their own pockets by insisting upon this feature of the bill." Little faith in the honesty of the medical profession is manifested in the following statement: "Even if you should put on a limit of, say, $100, as New Jersey does, and cut the time to two weeks, you would find that the amount the employer will be called upon to pay in a great majority of cases will be $100—or just a few dollars less."[5]

Even organized labor was sufficiently influenced by this exaggerated phantom of a "medical graft" to agree to the narrowest limitations of medical aid, as the $25 in Pennsylvania. "It is doubtful," argue representatives of the Pennsylvania Federation

[1] Proposed Workman's Compensation Act of Pennsylvania, *Report of the Conference of the Delegates of the Pennsylvania Federation of Labor with The Industrial Accident Commission*, 1912.

[2] The most extreme statement of this compensation-fund theory may be credited to a well-known insurance man, Mr. Edson S. Lott. "The waiting period should be two months. By eliminating the smaller misfortunes, you leave your fund for the use of alleviating real distress—permanent injuries and the like—instead of dissipating it for comparatively inconsequential injuries. To be laid up for a month is a misfortune, but not a real calamity. If the fund is eaten up for misfortunes, there is nothing left for calamities." It does not seem to occur to Mr. Lott that both misfortunes and calamities might and should be provided for (*Which Will Be Best for the Workman?* by Edson S. Lott, p. 124).

[3] *Which Will Be Best for the Workman?* By Edson S. Lott, New York, 1913, p. 126 (letter to the Michigan Commissioner of Insurance).

[4] *Ibid.*, p. 126.

[5] *Ibid.*, p. 125.

of Labor, "whether an increase in the allowance for the doctor would benefit the workingman. Experience shows that the doctors usually file a bill for the maximum amount."[1]

How far from the mark these statements fall is readily demonstrated by the Ohio data quoted on page 605. Notwithstanding such gross exaggerations, these fears rapidly spread throughout almost all the compensation states. A basis for them was found under liability-insurance conditions. Though seldom more than first aid was given, the physician was called in an emergency, and he was conscious of the double position, not only as the medical attendant, but also as possible important witness in defense of a liability suit. He presented substantial, sometimes extravagant, bills, and the liability insurance company seldom found it advisable to oppose their size. Hasty interpretation of early compensation statistics seemed to corroborate the fear of excessive medical costs. In every state the early months of application of the compensation law called forth loud complaints that the cost of medical services absorbed too great a proportion of the cost of compensation. The Industrial Commission of Wisconsin in its second annual report, covering the year July, 1912—June 30, 1913, expresses its alarm that "the cost of medical attendance, including hospital and nurse hire, has averaged 50 per cent of the indemnity that has been paid to the injured employee" (i.e., $33\frac{1}{3}$ per cent of the total cost of compensation).

In California the adoption of the compulsory act which went into effect on January 1, 1914, was followed by similar complaints which found seeming corroboration in the experience of the State Insurance Fund for the first six months (January 1—June 30, 1914) in paying out $8,783.38 in compensation and $12,844.50 in medical aid. For the entire state, experience of the first six months of the year indicates payments for:

Compensation	$187,187
Medical bills	155,157
Total	$342,344

[1] Proposed Workmen's Compensation Act of Pennsylvania, *Report of the Conference of the Delegates of the Pennsylvania Federation of Labor with the Industrial Accidents Commission*, 1912.

The cost of medical aid thus represents 83 per cent of the compensation, or 45 per cent of the total paid cost. The same situation was revealed in other states.

It is evident to the careful statistician, first, that these complaints were largely due to a misunderstanding. Since medical bills mature rapidly, while compensation benefits are payable in weekly instalments and the bulk of them is long deferred, the proportion of cash medical payments to cash compensation payments in the early months or even years of compensation experience can mean very little. Even if an effort was made to estimate the future payments on the accidents which occurred, the opportunity for error was great.

Secondly, the proportion of medical payments to compensation payments is not quite a fair measure of the cost. This proportion may vary between state and state even under identical provision for medical aid, because the basis, i.e., the scale of compensation, is different. The lower the basis of compensation the larger will necessarily be the share devoted to medical expense. In France, for instance, the cost of medical treatment (including even the cost of medical control of the injured) varies between 12.5 per cent and 15 per cent of the total cost, or 14 per cent and 17½ per cent of the cost of compensation; but that is based upon a scale of compensation which is considerably higher than any in the United States.

Usual estimates of the cost of medical aid in various states run between one-third and one-half of the amount paid out in compensation to the injured; i.e., for every dollar paid to the workman or his dependents from 33 to 50 cents is paid to the physicians and hospitals. Of the total cost, therefore, medical aid would absorb from 25 to 33 per cent. For one or two states more definite figures are available. Those for Massachusetts are presented in Table IV.[1]

Here it evidently makes a difference whether the proportion of expense which goes for medical benefits is computed on the basis of amounts actually paid out or on the total liability incurred—that is, amount paid or outstanding. Medical benefits for the two years constitute 30.7 per cent of the total amount actually

[1] These figures were obtained from preliminary blue-sheets issued by the Massachusetts insurance Department, on file, 1915.

paid out, or 21.8 per cent of the total amount paid or outstanding. The proportion of medical benefits to compensation alone was 44.3 per cent in the case of compensation actually paid, or 27.9 per cent of compensation paid or outstanding.[1] These figures may appear excessive as long as the percentages are kept in mind.

TABLE IV

	Compensation	Medical	Total	Per Cent Medical
On policies issued in 1912:				
Amount paid out*.....	$ 973,632	$372,278	$1,345,910	27.7
Amount outstanding.....	480,784	9,860	490,644	2.0
Total liability incurred.	$1,454,416	$382,138	$1,836,554	20.8
On policies issued in January–September, 1913:				
Amount paid out*.....	$ 649,609	$345,603	$ 995,212	34.7
Amount outstanding.....	632,869	32,232	665,101	4.8
Total liability incurred.	$1,282,478	$377,835	$1,660,313	22.7
On all policies issued July 1, 1912—September 30, 1913:				
Amount paid out.....	$1,623,241	$717,881	$2,341,122	30.7
Amount outstanding.....	1,113,653	42,092	1,155,745	3.6
Total liability incurred.	$2,736,894	$759,973	$3,496,867	21.8

* Up to December 31, 1914.

But as a matter of fact the data for the first group cover wage exposure of some 505 million dollars, and for the second period for 395 million dollars, making a total exposure of 900 million dollars, or perhaps 1,800,000 annual workers. Expressed in proportion to the pay-roll exposed (as all compensation insurance charges are

[1] It is characteristic of the primitive condition of our compensation statistics that for the same state different data are published by the Industrial Accident Board, covering the first twelve months' period, July 1, 1912—June 30, 1913 (*First Annual Report*, p. 326). According to these, the total compensation for accidents of that period amounted to $1,253,185 and medical expenses to $414,195, making a total of $1,667,380, of which the medical constituted 24.8 per cent. The total number of accidents reported to insurance companies was 73,251, making the average medical expenses $5.66. But in 31,768 trivial accidents neither medical expense nor compensation was paid, excluding which the average is $10. Of the remaining 31,383 accidents, 26,303 called for medical expenses only, which indicates the importance of the problem.

calculated), the cost for the first period was $7\frac{1}{2}$ cents per $100 of wages, during the second period $9\frac{1}{2}$ cents, and for the entire period about $8\frac{1}{2}$ cents, or on an average wage of $600, 51 cents per worker. The increase from 45 cents to 57 cents in one year is significant, but nevertheless the entire cost is extremely moderate.

In Illinois, data for the accidents of 1912 have been published[1] as shown in Table V. The average cost of medical aid for a fatal

TABLE V

	Number	Compensation	Medical	Total	Per Cent Medical
Fatal accidents.....	183	$177,317	$ 2,153	$179,470	1.2
Non-fatal accidents..	8,730	283,992	60,664	344,656	17.6
Total.....	8,913	$461,309	$62,817	$524,126	12.0

accident is stated to be $11.77 and for a non-fatal one only $6.97, thus producing but little support for the extravagant charges of medical graft.

Data were also published for the state of Ohio,[2] which are given in Table VI.

TABLE VI

	Compensation	Medical*	Total	Per Cent Medical
March 1, 1912—December 31, 1913	$ 293,340	$ 83,957	$ 377,297	22.3
January 1, 1914—June 30, 1914 ..	757,162	146,798	903,960	16.2
Total.....	$1,050,502	$230,755	$1,281,257	18.0

* State fund only. For employers carrying their own insurance no data as to medical benefits are available.

The proportion of the cost of medical aid to the total cost is here smaller than in Massachusetts, but without any reference to the pay-roll exposed, for which data are unfortunately not available, the comparison is dangerous, because the entire scale of benefits is so much higher in Ohio (perhaps by 70 per cent) than it

[1] *Sixth Report of the Illinois Bureau of Labor Statistics*, "Industrial Accidents in Illinois for 1912," p. 30.

[2] Ohio Industrial Commission, Department of Investigation and Statistics, *Report 2* (March 1, 1912—December 31, 1913) and *Report 4* (January 1—June 30, 1914).

was in Massachusetts until the amendment of 1914 took effect. On an assumption of that difference in the cost of compensation, the proportion of 22 per cent in the cost of medical to compensation in Ohio would equal 1.70×22 per cent or 37.5 per cent on the basis of Massachusetts compensation, or about 35 per cent over the Massachusetts medical cost $\left(\frac{37.5}{27.9} = 1.35\right)$, some 12.8 cents per $100 of wages (9.5 cents $\times$ 1.35 = 12.8 cents) or 77 cents per annum per average worker with an annual wage of $600.

A very large body of experience of the most important casualty companies seems to indicate that, as against the Massachusetts cost of 8½ cents per $100 of wages, the cost in Michigan was 10.8 cents, in Illinois 13 cents, and in New Jersey only 6.4 cents. This seems to agree with the comparative liberality of provision concerning medical aid in these states. The proportion alone is therefore a very unreliable measure of cost. There seems to be a great deal of truth in the following expression of views of a practicing physician in Massachusetts:

> There seems to be a great stress laid on the percentage paid the doctors. Now if we were paying compensation to well people we could easily understand why that criticism would be just, but we are paying compensation to a man more in need of medical service than he is of bread. If a man has a septic hand it may be a question of life and death; if a man has a broken leg, it is a question perhaps of his future earnings.[1]

As appears from the foregoing fragmentary data, the entire matter of statistics of accident compensation in this country is as yet in a very unsatisfactory condition. Efforts are, however, in evidence to bring some order into this chaos. The various government bodies charged with the supervision of workmen's compensation are organized into a National Association of Workmen's Compensation Boards, which has a standing committee for standardization of the statistical reports of these Boards. As yet, the boards or commissions of Massachusetts, California, Washington, and Ohio are the only ones to publish substantial statistics, and the

[1] Massachusetts Industrial Accident Board, *Bulletin No. 4*, April, 1913. "Medical Services under the Workmen's Compensation Act," p. 15.

absence of a uniform plan makes comparisons difficult.[1] The New York Commission, when consolidated with the Department of Labor, had the good fortune of finding Dr. L. W. Hatch and his Bureau of Statistics available for its work, which offers a promise of rich results. On the other hand, the Workmen's Compensation Service Bureau, an organization of some twenty casualty insurance companies, has found accurate statistics indispensable for rate-making, and has evolved an extremely interesting plan for co-operative statistics which will cover much more than half the volume of compensation insurance in this country.[2]

Finally, the organization of the Casualty Actuarial and Statistical Society of America in November, 1914, furnishes a special scientific body for the study of the problems of compensation in the light of statistical experience, facilitated by the appointment of a special committee in compensation statistics. In his very interest-

TABLE VII

COST OF MEDICAL AND HOSPITAL SERVICES

Kind of Medical Benefit	1 Death	2 Specified Injuries (Dismemberment)	3 Permanent Total Disabilities	4 Permanent Partial Disabilities	5 Temporary Disabilities	6 Medical and Hospital Services Only
Medical services						
Hospital services						
Nurses						
Ambulances						
Surgical appliances						
Total						

ing paper on "Essential Factors in the Computation of Cost of Workmen's Compensation"[3] Mr. W. A. Magown, then chief of the Compensation Bureau of the Massachusetts Insurance Department, suggested the analysis of medical payments under compensation given in Table VII. Such an analysis would furnish accurate data,

[1] See E. H. Downey, "Essentials of Workmen's Compensation Statistics," *Journal of Political Economy*, December, 1914.

[2] C. E. Scattergood in the *Journal of Commerce*, January 1, 1915.

[3] *Proceedings of the Casualty Actuarial and Statistical Society of America*, I, November 2, 1914, p. 189.

not only as to comparative cost of the various subdivisions of the generic term "medical aid," but also as to the comparative importance of these services for different groups of accidents. A comparison of these data for different states, especially with reference to the number of cases handled, will give very interesting results. But a further, more refined, analysis may lead to even more valuable conclusions. To quote from the writer's presidential address before the second meeting of the Casualty Actuarial and Statistical Society:

> I should like to know, for instance, what effect, if any, the wage of the injured has upon the duration of injury, and whether it is true that a higher compensation scale, by offering a greater incentive to malingering, increases the duration of disability, or whether the opposite may not be true by any manner of means, that by furnishing a greater measure of help and comfort, the higher compensation scale does lead to more rapid recovery. One or two acts have failed to embody medical aid in their compensation acts. I should like to know whether that influences the duration of identical injuries.

A similar analysis may also shed some light upon the effects of the various limitations of medical aid, described in the preceding pages.

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NOTE.—Since this article was prepared several new compensation laws were passed in 1917, and many other acts were amended. The provisions of the new acts and amendments dealing with the subject of medical aid will be analyzed in a supplementary note following the second part of this study in the July issue of the *Journal of Political Economy*.